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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/788,959	02/27/2004	Ehssan Taghizadeh	C325.12-0002	6671
164	7590	02/27/2009	EXAMINER	
KINNEY & LANGE, P.A.			POLLACK, MELVIN H	
THE KINNEY & LANGE BUILDING				
312 SOUTH THIRD STREET			ART UNIT	PAPER NUMBER
MINNEAPOLIS, MN 55415-1002			2445	
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			02/27/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/788,959	TAGHIZADEH ET AL.	
	Examiner	Art Unit	
	MELVIN H. POLLACK	2445	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 13 November 2008.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-21 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-21 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 01 April 2004 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date _____.

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
 5) Notice of Informal Patent Application
 6) Other: see attached office action.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 13 November 2008 have been fully considered but they are not persuasive. An analysis of the arguments is provided below.
2. Applicant argues that examiner merely provides consolidated characterization rather than mapping the claims (Pp. 10-11). While it is true that the examiner is supposed to provide insight as to interpreting the art and comparing it with the claims, he is not required to map the claims, nor is the applicant obviated from his requirement to read the art as a whole in light of the knowledge of one of ordinary skill in the art. The examiner maintains that the arguments are more than simple assertions of concepts but shows that the invention, based on the examiner's interpretation of the scope and meaning of the claims, is taught by the art, and that a roadmap of understanding the art has been provided. The examiner will explain further in regards to certain concepts.
3. Regarding claims 1 and 14, Applicant argues that Ferlitsch does not expressly disclose that "the firmware writes portions of the received serial port data to FIFO registers of the serial device, if a queue is empty, before writing remaining data of the received serial port data to the queue of the selected one of the serial devices (Pp. 5 – 6, 8)." Ruberg et al. discloses that the firmware writes portions of the data to the queues of serial devices (col. 14, lines 30 – 35) depending on its emptiness (col. 9, line 55 – col. 12, line 55; col. 13, lines 5 – 40), but does not expressly disclose that the serial device comprises FIFO registers. Ferlitsch discusses not only

that the serial device comprises FIFO registers but that the device comprises queues to receive serial port data (including, but not limited to, spooled print jobs and related headers and data).

4. In response to applicant's argument, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

5. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

6. In the above description, it is clear that both Ruberg in view of Ferlitsch would suggest, to one of ordinary skill of the art, that Ruberg could be modified and improved with the addition of FIFO registers well known in serial device art. Furthermore, it is clear that when FIFO registers "despool" print data, they are operating with serial data from a device server, in this case a print server. Thus, the limitation is taught by the combination.

7. Regarding claims 8, 20, applicant argues that the combination does not expressly disclose that the "applications have a semi-blocking read function for transferring the serial data (Pp. 6, 9)." Applicant is reminded that the examiner interprets this phrasing in the broadest reasonable definition to one of ordinary skill in the art, based on the specification and claims (i.e. claim 9). Applicant is also reminded that the art does not have to utilize the express term, provided that it

teaches an equivalent to the broadest reasonable interpretation. As such, the applicant may be able to obviate this rejection by amendment or clarification of this term.

8. In this case, examiner read the term based on the ordinary meaning of blocking (some form of security) and upon claim 9 (transmission of data when ready). Under this interpretation, it is clear that Ruberg teaches this limitation (col. 11, line 10 – col. 14, line 15).

9. Regarding claims 13, 19, applicant argues that the combination does not expressly disclose intercharacter interval timer settings or timeouts (Pp. 7, 8). (Examiner presumes that applicant refers to the flag indicating exceeding of preset value when discussing timeouts.) Ruberg teaches the usage of heartbeat messages, wherein the time stamps of device records are created by and compared to a universal clock comprised of signed 32-bit integers (intercharacter interval). When the interval exceeds a preset value (number of time periods have expired without response), a flag is created (remote unit labeled non-functional). While it is true that the term “intercharacter interval” is not used, Ruberg teaches a functional and definitional equivalent.

10. Therefore, the rejection is maintained for the reasons above, and is final.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 1-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ruberg et al. (7,085,805) in view of Rabinovitz et al. (7,000,037) and Ferlitsch (7,190,477).

13. Ruberg teaches a method and system (abstract) of providing access to shared serial devices over a network (col. 1, line 1 – col. 3, line 40; col. 16, lines 15-25), wherein a device server talks with a host and with peripheral devices (col. 3, line 40 - col. 5, line 25), wherein device drivers (device manager and service) interact (col. 5, line 25 – col. 7, line 40) with a middleware layer (firmware) to translate between Internet network messages and serial (USB) messages (col. 7, line 45 – col. 8, line 50). The firmware then directs the data to the correct serial device (col. 9, line 55 – col. 12, line 55; col. 13, lines 5-40) and places the data in a queue (col. 14, lines 30-35). The server may handle timeouts and intercharacter interval flags (col. 15, line 20 – col. 16, line 15).

14. Ruberg does not expressly state the particular method of Ethernet-serial conversion, including usage of cables and ports. Rabinovitz teaches a method and system (abstract) of providing access to shared serial devices over a network (col. 1, line 1 – col. 9, line 67; col. 13, lines 40-50), wherein the serialization and placement of information is more defined (col. 10, line 1 – col. 11, line 60). At the time the invention was made, one of ordinary skill in the art would have added Rabinovitz to Ruberg in order to achieve better transfer speeds and smaller form factors (col. 8, lines 60-65).

15. Ruberg does not expressly disclose the particulars of queuing, using FIFO registers and serial chips. Ferlitsch teaches a method and system (abstract) of providing access to shared serial devices over a network (col. 1, line 1 – col. 9, line 65; col. 18, lines 10-20) that teaches these limitations (col. 9, line 65 – col. 14, line 67). At the time the invention was made, one of

ordinary skill in the art would have added Ferlitsch to Ruberg in order to limit periodic polling and to avoid losing jobs (col. 4, lines 55-67).

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MELVIN H. POLLACK whose telephone number is (571)272-3887. The examiner can normally be reached on 8:00-4:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on (571) 272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. H. P./
Examiner, Art Unit 2445
26 February 2009

/Larry D Donaghue/
Primary Examiner, Art Unit 2454